



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,632	05/11/2005	Robert L Bingle	DONO1 P-1118	8644
28101	7590	02/02/2010	EXAMINER	
VAN DYKE, GARDNER, LINN & BURKHART, LLP SUITE 207 2851 CHARLEVOIX DRIVE, S.E. GRAND RAPIDS, MI 49546			SENFI, BEHROOZ M	
			ART UNIT	PAPER NUMBER
			2621	
			MAIL DATE	
			02/02/2010	DELIVERY MODE
				PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/534,632	BINGLE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	BEHROOZ SENFI	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 16 October 2009.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,5-9,12,15,16,31,34-37,40,41 and 47-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 16 and 49 is/are allowed.
- 6) Claim(s) 1,5-9,12,15,31,34-37,40,41 and 47-48 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                 | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                        | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|   | 6) <input type="checkbox"/> Other: _____ .                        |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's arguments, filed 10/16/2009 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

2. Claim 5 is objected to under 37 CFR 1.75(c), as being of improper dependent form. Claim is dependent to the canceled claim 4. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. For the purpose of art rejection, examiner treats the claim as being dependent to claim 1.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pastrick et al. (US 6,276,821) in view of Bos (US 6,201,642).

Regarding claim 1, Pastrick discloses, an imaging system for a vehicle (i.e., figs. 12-13 and 21-33, col. 29, lines 62-col. 30, lines 13, also please see, incorporated US patent 5,670,935 by reference herein in its entirety, col. 7, lines 28-35), the imaging system comprising; a camera module positionable at the vehicle (i.e., cols. 29-30, lines 62-13 also please see, incorporated US patent 5,670,935 by reference herein in its

entirety, col. 7, lines 28-35), the camera module comprising a plastic housing and an imaging sensor (i.e., fig. 22, plastic casing/housing 212 can include imaging sensors/cameras, col. 10, lines 20-25, col. 19, lines 8-35 and col. 29, lines 62-67) the plastic housing including a first portion and a second portion (i.e., col. 19, lines 8-35), the first portion and the second portion being one of laser welded and sonic welded together to substantially seal the image sensor and associated components within the plastic housing (i.e., col. 19, lines 8-35), wherein the camera module comprises an electrical connector that is electrically connected to a vehicle electrical connector when the camera module is positioned at the vehicle (it is noted that the camera module as discussed with respect to the above references would comprise the electrical connector in order to receive power from the vehicle power system), wherein the first portion of the camera module comprises a connector portion and includes the electrical connector at an end thereof and the second portion of the camera module comprises a camera portion and includes a transparent cover portion at or near an end of the lens for receiving an image there through (please see; figs. 5,7, 29, 31, 43-44 and 47, col. 27, lines 38-48, col. 29, lines 62-65), and control operable to process images captured by said image sensor (i.e., col. 29-30, lines 62-13, incorporated US patent 5,670,935 by reference herein in its entirety, col. 7, lines 28-35, line).

Pastrick shows the camera being installed inside the vehicle mirror, but is silent in regards to explicit of self-contained camera and pixilated imaging array, as specifies in the claim.

Bos (i.e., figs. 1-2 and 4, the imaging unit 10 and 10' col. 8, lines 33-67, cols. 9-10, lines 41-22, and cols. 11-12, lines 65-23) teaches the above subject matter.

In view of the above, it would have been obvious to one skilled in the art at the time of the invention was made to combine the teaching of Pastrick and Bos, as a whole, in order to enhance exterior visibility to the driver of a vehicle and to minimize the cost and weight, as suggested by Bos (cols. 1-2, lines 63-4).

Regarding claim 5, the combination of Pastrick and Bos teaches the imaging system of claim 1, wherein the transparent cover is one of laser welded and sonic welded to the camera portion (Pastrick; col. 19, lines 8-35).

5. Claims 6-8,31,35 and 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pastrick et al. (US 6,276,821) in view of Bos (US 6,201,642) further in view of Kallhammer et al. (US 2008/0043105).

Regarding claim 6, Although Pastrick discloses, the imaging system of claim 1, wherein the signal light module including the imaging sensor is detachable to the vehicle exterior body (i.e., col. 30, lines 14-21).

Pastrick is silent in regards to explicit of housing that is movable relative to an exterior portion of the vehicle to move the image sensor between a stored position generally within the portion of the vehicle and an operational position where the image sensor is positioned to have a field of view exteriorly of the vehicle.

Kallhammer (i.e., page 3, paragraphs 0061-0062) teaches, movable housing to move the image sensor between a stored position generally within the portion of the

vehicle and an operational position where the image sensor is positioned to have a field of view.

In view of the above, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teaching of Pastrick and Kallhammer as a whole, in order to improve the vision arrangement, as suggested by Kallhammer (i.e., page 1, paragraph 0006).

Regarding claim 7, the combination of Pastrick, Bos and Kallhammer teaches, the imaging system of claim 6, wherein the movable housing comprises a transparent panel, the transparent panel being positioned at least partially across an opening of the housing and generally in the field of view of the image sensor (Pastrick; col. 27, lines 14-48, also Kallhammer, page 1, paragraph 0007, page 3, paragraph 0054 and page 4, paragraph 0068).

Regarding claim 8, the combination of Pastrick, Bos and Kallhammer teaches, the imaging system of claim 7, wherein the movable housing comprises a panel cleaning device positionable at the exterior portion of the vehicle and configured to engage an exterior surface of the transparent panel to clean the transparent panel as the housing moves the image sensor between the stored position and the operational position (Kallhammer, page 3, paragraph 0062).

Regarding claim 31, the limitations claimed have been addressed in claims 6-8 above. as for the additional limitations, wiper element (please sees; paragraph 0015 of Kallhammer).

Regarding claim 35, Pastrick is silent in regards to explicit of, spraying device operable to spray fluid onto the transparent panel.

However, examiner takes Official Notice to indicate that the spraying device operable to spray fluid onto the transparent panel is well known and used in the conventional prior art of record, please see (US 2003/0090569, paragraph 0017).

Therefore; it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement such known features to for the purpose of cleaning the area within the field of vision of the camera.

Regarding claim 47, please refer to claim 6 above.

Regarding claim 48, the combination of Pastrick, Bos and Kallhammer teaches determine a distance to at least one object (i.e., fig. 4 of incorporated US patent 5,670,935 by reference in its entirety).

6. Claims 9 and 36-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pastrick et al. (US 6,276,821) in view of Bos (US 6,201,642) further in view of Kallhammer et al. (US 2008/0043105) and further in view of Strumolo et al. (US 6,535,242).

Regarding claim 9, the combination of Pastrick, Bos and Kallhammer teaches housing moves the image sensor to the operational position, as discussed in the above action.

The combination is silent in regards to explicit of, illumination source.

Strumolo (i.e., col. 6, lines 12-24) teaches the illumination source activation based on the ambient light level.

In view of the above, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teaching of Kallhammer and Strumolo as a whole, in order to improve vehicular image acquisition, as suggested by Strumolo (i.e., col. 1, lines 49-50).

Regarding claims 36-37 and 40-41, please refer to claim 9 above.

7. Claims 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pastrick et al. (US 6,276,821) in view of Bos (US 6,201,642) further in view of Strumolo et al. (US 6,535,242).

Regarding claim 12, Pastrick is silent in regards to explicit of, at least one illumination source, the control being operable to selectively activate the at least one illumination source in response to a detected ambient light level.

Strumolo (i.e., col. 6, lines 12-24) teaches the illumination source activation based on the ambient light level.

In view of the above, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teaching of Pastrick and Strumolo as a whole, in order to improve vehicular image acquisition, as suggested by Strumolo (i.e., col. 1, lines 49-50).

Regarding claim 15, Pastrick is silent in regards to explicit of; selectively switch the image sensor from a color mode to a black and white mode.

However, examiner takes Official Notice to indicate that the dual mode camera for switching from color mode to black and white mode is notoriously well known and used in the conventional prior art.

Therefore; it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement such known features to for the purpose of switching between modes based on the light condition.

8. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pastrick et al. (US 6,276,821) in view of Bos (US 6,201,642) further in view of Kallhammer et al. (US 2008/0043105) and Schofield et al. (US 6,690,268).

Regarding claim 34, the combination of Pastrick, Bos and Kallhammer teaches the imaging system of claim 31, wherein the housing moves the imaging device to the operational position, as discussed in the above action.

The combination is silent in regards to explicit of, reverse gear.

Schofield (i.e., col. 33, lines 62-col.35, lines 3) teaches the engagement of a reverse gear of the vehicle and activation of the rear view camera.

Therefore; it would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teaching of Pastrick and Schofield, as a whole, in order to function as a reversing aid (i.e., col. 33, lines 62-65).

#### ***Allowable Subject Matter***

9. Claims 16 and 49 are allowed.

10. The following is an examiner's statement of reasons for allowance: The prior art of the record fails to anticipate or fairly suggest, the camera module including ventilation portion, as described in claim 16; and the control operation as specifies in claim 49, along with all other limitations in the claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### Contact

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Behrooz Senfi whose telephone number is 571-272-7339. The examiner can normally be reached on M-F 7:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Behrooz Senfi/  
Primary Examiner  
Art Unit 2621